Abstract

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This work was aimed at study of biotransformation of exogenous precursor hydroquinone to arbutin with in vitro explant culture Datura meteloides D.C. ex Dunal. Into the medium were added precursor of arbutin hydroquinone in concentration 100 mg/l a 200 mg/l and growth factors 2,4-D or NAA in concentrations 0,1 %, 1 mg/l 10 mg/l. Taking of samples were in time intervals 24, 48 and 168 hours.

Positive results were obtained (TLC and HPLC analysis) in production of arbutin in all suspension cultures. Concentrations increased during time of cultivation together with increasing concentration of precursor arbutin and concentration of growth factor.

Biggest value of arbutin in cultivation on medium with growth factor 2,4-D was in sample with H 200 mg/l, 10 mg/l 2,4-D and cultivation time 168 hours (1,42 %).

Biggest value of arbutin in cultivation on medium with growth factor NAA was in sample with H 200 mg/l, 10 mg/l NAA and cultivation time 168 hours (1,81%).

Arbutin was released into medium.